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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------|
| 10/710,782 | 08/02/2004 | Paul John Freitas | | 4781 |
| 45977 | 7590 | 08/11/2005 | | |
| PAUL J. FREITAS 942 PELLEGRINI STREET SANTA CRUZ, CA 95062 | | | EXAMINER QIN, JIANCHUN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2837 | |

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/710,782

Applicant(s)

FREITAS, PAUL JOHN

Examiner

Jianchun Qin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/02/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.
2. The oath or declaration is defective because the oath/declaration does not include the signature of the inventor and the date of execution.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-4, 6, 9, 10, 13 and 18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-4, 6, 9, 10, 13 and 18, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Green (U.S. Pat. No. 3509264).

With respect to claim 1:

Green teaches an electric percussion instrument comprising: a surface portion that vibrates in response to an activating action, such as striking with hands or sticks or the interception of vibrational energy from another electric percussion instrument placed nearby, thus creating sound energy directly (col. 2, lines 18-19; Fig. 1, #12); an electrically charged or chargeable material attached to said surface portion, thus enabling the vibration state of the surface to be determined by means of an electric device (col. 2, lines 18-21; Fig. 1, #13).

With respect to claims 2, 3 and 5-8:

The teaching of Green further includes: said percussion instrument comprises a flexible material, such as a drumhead assembly (col. 2, lines 18-19 and 29-35; Figs. 1 and 2, #12); said electric percussion instrument comprises a rigid material, such as a cymbal assembly (col. 2, lines 21-28); means to shield said electrically charged or chargeable surface from electromagnetic interference (col. 2, lines 36-57); means of converting the vibration state of said surface to a

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signal that can be sent to an external device, such as an electric circuit with an appropriate sensor (col. 3, lines 5-22); a mount for supporting said electric percussion instrument, thus allowing it to vibrate in a desired manner (col. 2, lines 29-35); means of excluding electromagnetic interference from said signals (col. 2, lines 36-57).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Green (U.S. Pat. No. 3509264) in view of Suenaga (U.S. Pat. No. 5633473).

Green teaches the percussion instrument that includes the subject matter discussed above. Green does not mention expressly: means to reduce or minimize sound output from said electric percussion instrument, such as through addition of acoustically damping materials or holes to said percussion instrument.

Suenaga discloses a drumhead for percussion instruments, and teaches: means to reduce or minimize sound output from said percussion instruments, such as through addition of acoustically damping materials or holes to said percussion instrument (cols. 4-5, lines 64-3).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Suenaga in the invention of Green in order to reduce the volume of sounds produced by striking said percussion instrument without deterioration of striking actions and striking feeling for a player (Suenaga, col. 2, lines 7-11).

9. Claims 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green (U.S. Pat. No. 3509264) in view of Ebihara et al. (U.S. Pat. No. 3956959).

With respect to claim 9 and 10:

Green teaches the percussion instrument that includes the subject matter discussed above. Green does not mention expressly: regarding claim 9, a plurality of additional said electric percussion instruments, which can respond vibrationally to direct activating actions by the user or vibrational responses of other said electric percussion instruments, thus producing additional sounds; a plurality of mounts for said additional electric percussion instruments that allow them to vibrate in a desired manner; regarding claim 10, means of modifying the output signals of said electric percussion instrument to change their characteristics, such as amplitude or spectral composition.

Ebihara et al. teach an electric percussion instrument, including: a plurality of additional said electric percussion instruments, which can respond vibrationally to direct activating actions by the user or vibrational responses of other said electric percussion instruments, thus producing additional sounds (col. 1, lines 50-68; col. 3, lines 12-18 and 33-63); a plurality of mounts for said additional

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electric percussion instruments that allow them to vibrate in a desired manner (col. 3, lines 12-18 and 33-63); and means of modifying the output signals of said electric percussion instrument to change their characteristics, such as amplitude or spectral composition (col. 1, lines 40-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Ebihara et al. in the invention of Green in order to provide an improved percussion instrument capable of producing sounds closely imitative of sounds of original percussion instruments (Ebihara et al., col. 1, lines 42-46).

With respect to claims 11-14:

Green teaches the percussion instrument that includes the subject matter discussed above. Green does not mention expressly: regarding claim 11, an instrument housing comprising: mounts for one or more electric percussion instruments as described above, thus allowing them to vibrate in a desired manner in response to activating actions by the user; regarding claim 13, means of modifying the output signals of said instrument to change their characteristics, such as amplitude or spectral composition; and means of providing an activating action to one or more electric percussion instruments mounted on said housing.

Ebihara et al. teach an electric percussion instrument, including an instrument housing (Fig. 1, #1), comprising: mounts for one or more electric percussion instruments as described above, thus allowing them to vibrate in a desired manner in response to activating actions by the user (col. 3, lines 12-18 and 33-63). Ebihara et al. also teach: means of converting the vibrational state of

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said electric percussion instruments to signals that can be sent to an external device (col. 3, lines 50-57; col. 4, lines 3-16; col. 5, lines 6-14); means of modifying the output signals of said instrument to change their characteristics, such as amplitude or spectral composition (col. 1, lines 40-49); and means of providing an activating action to one or more electric percussion instruments mounted on said housing (col. 3, lines 12-18 and 33-63).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Ebihara et al. in the invention of Green in order to provide an improved percussion instrument capable of producing sounds closely imitative of sounds of original percussion instruments (Ebihara et al., col. 1, lines 42-46).

As per claim 12, the teaching of Green includes means of excluding electromagnetic interference from said signals (col. 2, lines 36-57).

With respect to claims 15-18:

Green teaches an electronic apparatus, comprising: a sensor comprising electrically charged or chargeable surface, sensitive to vibrations occurring in electric percussion instruments as described above placed in close proximity to said sensor (cols. 1-2, lines 66-14; col. 2, lines 18-21); means of converting time-varying changes in voltage difference between said sensor and said electric percussion instrument to signal that can be sent to external devices (col. 3, lines 5-22).

Green does not mention expressly: a plurality of sensors and a plurality of percussion instruments; mounts for said electric percussion instruments placed

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near said sensors; a plurality of said electric percussion instruments that can be activated by a user, thus creating sound and signals; means of transforming said signals to make them more desirable, such as changing their amplitude or their spectral composition.

Ebihara et al. teach an electric percussion instrument, including: a plurality of additional said electric percussion instruments that can be activated by a user, which can respond vibrationally to direct activating actions by the user or vibrational responses of other said electric percussion instruments, thus producing additional sounds (col. 1, lines 50-68; col. 3, lines 12-18 and 33-63); a plurality of sensors (col. 3, lines 33-63); a plurality of mounts for said additional electric percussion instruments that allow them to vibrate in a desired manner (col. 3, lines 12-18 and 33-63); and means of transforming said signals to make them more desirable, such as changing their amplitude or spectral composition (col. 1, lines 40-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Ebihara et al. in the invention of Green in order to provide an improved percussion instrument capable of producing sounds closely imitative of sounds of original percussion instruments (Ebihara et al., col. 1, lines 42-46).

Prior Art Citations

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Mori et al. (U. S. Pat. No. 5633473) is entitled "Electronic musical instrument".

2) Bozzio (U. S. Pat. No. 4700602) is entitled "Electronic drum".

3) Yoshino (U.S. Pub. No. 20040118269) is entitled "Electronic percussion instrument and vibration detection apparatus".

Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianchun Qin whose telephone number is (571) 272-5981. The examiner can normally be reached on 8am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JQ

August 2, 2005

Jianchun Qin
Examiner
Art Unit 2837



DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800